

By Express Mail # EL 913696160 US · January 11, 2002

In the Claims:

Please cancel claims 1 to 8 and add the following new claims:

--9. A process for detecting a state of a catalyst system installed in an exhaust gas channel of an internal combustion engine of a motor vehicle, through which catalyst system exhaust gas from the internal combustion engine flows so that the exhaust gas can be purified, the process comprising the steps of:

detecting at least one operating parameter of the catalyst system over a predetermined time period;

determining a total energy output of the internal combustion engine within the predetermined time period; and

calculating a characteristic value (k) based on a ratio of the at least one operating parameter to the total energy output.


10. A process according to claim 9, further including forming an average characteristic value (k_m) from a predetermined number n of characteristic values (k).

11. A process according to claim 9, further including generating a maintenance signal as a function of the characteristic value (k).

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12. A process according to claim 10, further including generating a maintenance signal as a function of the average characteristic value (k_m).

13. A process according to claim 11, wherein the maintenance signal generating step includes generating of a maintenance signal when the characteristic value exceeds a predetermined threshold value.

 14. A process according to claim 12, wherein the maintenance signal generating step includes generating of a maintenance when the average characteristic value exceeds a predetermined threshold value.

15. A process according to claim 9, wherein the step of determining the total energy output includes finding the total energy output based on a power-equivalent variable.

16. A process according to claim 15, wherein the total energy output is found based on a cumulative air quantity.

17. A process according to claim 9, wherein the at least one operating parameter of the catalyst system comprises a catalyst temperature and an amount of one of the group consisting of HCs, CO, O₂, and NO_x in the exhaust gas.

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18. A process according to claim 9, wherein the predetermined time period occurs within an acceleration phase of the motor vehicle.

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and

19. A process according to claim 9, wherein the process is conducted within at least one of a predetermined lambda region and a predetermined temperature range.--

In the Abstract:

Please cancel the original abstract and insert the attached abstract to the end of the application.